Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10684412	VEALE ET AL.
	Examiner Soderquist, Arlen	Art Unit 1743

Notes	Date	Examiner
EAST search (search terms included)	5/18/2005	AS
STN search in CA,BIOSI and MEDLINE files (search and edited results included)	5/18/2005	AS

	Type	L #	Hits	Search Text	DBs
1	IS&R	L1	26	(("4578762") or ("5060505") or ("5334536") or ("5387971") or ("5451787") or ("5468962") or ("5474665") or ("5485527") or ("5572031") or ("5637872") or ("5677534") or ("5703365") or ("5821537") or ("5886247") or ("5892577") or ("5930000") or ("6001499") or ("6006585") or ("6055876") or ("6121627") or ("6157033") or ("6267927") or ("6274879") or ("6359278") or ("6483589") or ("6525813")).PN.	USPAT; USOCR
2	IS&R	L2	1	("6639678").PN.	USPAT; USOCR
3	BRS	L3	113.	(bottle or vial or container)same(headspace or head adj space or inspect$)same laser	USPAT
4	BRS	L4	2224	(analyzer or analyser or detect or detector or detection or detecting or determine or determining or determination or measure or measuring or measurement or test or testing or analyze or analysis or monitor or monitoring or sense or sensing or sensor)with(headspace or head adj space or inspect$)same laser	USPAT
5	BRS	L5	2173	4 not 3	USPAT
6	BRS	L6	176	5 and (bottle or vial or container)	USPAT
7	BRS	L7	5926	(analyzer or analyser or detect or detector or detection or detecting or determine or determining or determination or measure or measuring or measurement or test or testing or analyze or analysis or monitor or monitoring or sense or sensing or sensor or inspect$)with(headspace or spave or volume)same laser	USPAT
8	BRS	L8	1043	7 and (bottle or vial or container)	USPAT
9	BRS	L9	66	7 same (bottle or vial or container)	USPAT
10	BRS	L10	975	8 not 3 not 9	USPAT
11	BRS	L11	5025	(analyzer or analyser or detect or detector or detection or detecting or determine or determining or determination or measure or measuring or measurement or test or testing or analyze or analysis or monitor or monitoring or sense or sensing or sensor or inspect$)with(gas or gaseous or vapor or vaporous or volatile or semivolatile or oxygen or co2 or carbon adj dioxide)same laser	USPAT

	Type	L #	Hits	Search Text	DBs
12	BRS	L12	144	11 same (bottle or vial or container or headspace or head adj space)	USPAT
13	BRS	L13	140	12 not 3	USPAT

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(FILE 'HOME' ENTERED AT 10:55:12 ON 18 MAY 2005)
FILE 'CA' ENTERED AT 10:55:19 ON 18 MAY 2005
L1 536901 S (GAS OR GASEOUS OR VAPOR OR VAPOROUS OR VOLATILE OR SEMIVOLATILE OR OXYGEN OR CO2 OR CARBON DIOXIDE)(7A)(DETECT? OR DETERMIN? OR ASSAY? OR ANALY? OR ASSESS? OR TEST? OR MEASUR? OR MONITOR? OR ESTIMAT? OR EVALUAT? OR EXAMIN? OR SENSE# OR SENSOR OR SENSING OR IDENTIF? OR PROBE# OR PROBING)
L2 20029 S (GAS OR GASEOUS OR VAPOR OR VAPOROUS OR VOLATILE OR SEMIVOLATILE OR OXYGEN OR CO2 OR CARBON DIOXIDE)(7A)(QUANTITAT? OR QUANTIF? OR CHECK?)
L3 13377 S L1-2(10A)(HEAD SPACE OR HEADSPACE OR BOTTLE OR VIAL OR AMPULE OR CONTAINER OR CHAMBER OR PACKAG?)
L4 2473 S L3 AND(ONLINE OR REAL TIME OR FOOD OR BEVERAGE OR BEER OR PHARMACEUTICAL OR DRUG OR CONVEY? OR SEALED)
L5 136 S L4 AND(LASER OR SPECTROPHOT? OR PHOTOMET? OR PHOTOSPECTRO? OR COLORIM?)
L6 1 S L4 AND ABSORPTION SPECTROSCOPY NOT L5
L7 137 S L5-6
FILE 'MEDLINE' ENTERED AT 11:27:53 ON 18 MAY 2005
L8 28 S L7
FILE 'BIOSIS' ENTERED AT 11:29:31 ON 18 MAY 2005
L9 56 S L7
FILE 'CA, MEDLINE, BIOSIS' ENTERED AT 11:31:43 ON 18 MAY 2005
L10 177 DUP REM L7 L8 L9 (44 DUPLICATES REMOVED)

=> d bib,ab 1-177 l10

L10 ANSWER 18 OF 177 CA COPYRIGHT 2005 ACS on STN
AN 139:311279 CA
TI Apparatus and method for nondestructive **monitoring** of **gases** in **sealed containers**
IN Veale, James R.
PA Lighthouse Instruments L.L.C., USA
SO U.S., 12 pp.
PI US 6639678 B1 20031028 US 2000-615739 20000713
PRAI US 2000-615739 20000713
AB A system and method for nondestructive **detection** of **gas** in a **sealed container**. The system includes a tunable diode **laser** source that provides a uncollimated **laser** beam for absorption in a substance to be measured, a detector that detects the **laser** beam, and a zone that accepts one or more of the selected containers. Each container is substantially optically transparent and may contain the substance to be measured. The zone is located between the detector and a **laser** source configured to transmit the **laser** beam through the zone. The invention also includes a collection lens that focuses the **laser** beam onto the detector, the collection lens being located between the zone and the detector.

L10 ANSWER 35 OF 177 BIOSIS STN
AN 2002:498891 BIOSIS
TI Headspace FT-IR analysis of rapeseed oil oxidation.

AU Ahro, Mikko; Hakala, Mari; Kauppinen, Jyrki; Kallio, Heikki [Reprint author]
CS Department of Biochemistry and Food Chemistry, University of Turku, FIN-20014, Turku, Finland
SO Applied Spectroscopy, (February, 2002) Vol. 56, No. 2, pp. 217-222.
AB Volatile compounds formed by oxidation of rapeseed oil at 60degreeC in open beakers were studied as a function of time over 289 h. A direct inlet gas-phase FT-IR method was introduced and compounds indicating lipid oxidation were detected and quantified. The development of 1,3,5-trimethylbenzene, 2,4-hexadienal, 2-methyl-1,3-butadiene, 2-methyltetrahydrofuran, acetic acid, methyl cyclopentane, methyl hexanoate, n-butanal, n-hexanal, n-octanal, n-propanal, and trans,trans-2,4-heptadienal was followed. The results showed that gas-phase FT-IR is a potential method of fast analysis for monitoring oil quality. Headspace-gas chromatography-mass spectrometry (HS-GC-MS) was used for compound identification.

L10 ANSWER 40 OF 177 CA COPYRIGHT 2005 ACS on STN
AN 138:135982 CA
TI Direct olive oil analysis
AU Valcarcel, M.; Gallego, M.; Cardenas, S.; Pena, F.
CS Analytical Chemistry Division, University of Cordoba, Cordoba, 14071, Spain
SO Grasas y Aceites (Sevilla, Spain) (2002), 53(1), 1-7
AB A review. The practical impact of "direct anal." is undeniable as it strong contributes to enhance the so-called productive anal. features such as expeditiousness, redn. of costs and minimization of risks for the analysts and environment. The main objective is to establish a reliable bypass to the conventional preliminary operations of the anal. process. This paper offers a systematic approach in this context and emphasizes the great field of action of direct methodologies in the routine anal. of olive oil. Two main types of methodologies are considered. On the one hand, the direct detn. of volatile components is systematically considered. On the other hand, simple procedures to automatically implement the preliminary operations of the oil anal. using simple devices in which the sample is directly introduced with/without a simple diln. are present and discussed.

L10 ANSWER 77 OF 177 CA COPYRIGHT 2005 ACS on STN
AN 128:320879 CA
TI Method **determining** concentration of **carbon dioxide** in **bottles** with carbonated drinks and device for its implementation
IN Glebov, Yurij A.; Shenderovich, Lev S.; Kuznetsov, Vladimir V.; Goncharov, Aleksej I.; Butkova, Olga L.
PA Nauchno-Proizvodstvennoe Ob"edinenie Pivovarennoj, Bezalkogolnoj I Vinodelcheskoj Promyshlennosti, Russia
SO Russ. From: Izobreteniya 1997, (36), 409.
PI RU 2100804 C1 19971227 RU 1996-112820 19960627
PRAI RU 1996-112820 19960627
AB Title only translated.

L10 ANSWER 78 OF 177 CA COPYRIGHT 2005 ACS on STN
AN 127:64924 CA
TI Nondestructive deterioration detection of **sealed** perishable **foods**

IN Ishihara, Masaru; Suzuki, Eiichi Ro; Hiraishi, Akira; Yamanaka, Shigeru
PA Ajinomoto Co., Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
PI JP 09127001 A2 19970516 JP 1995-283590 19951031
PRAI JP 1995-283590 19951031
AB The methods employ: a **laser** Raman spectrometer; a **sealed** transparent **container** contg. a perishable **food**; and means for **detecting** the decompd. **gases** in the **head space** of the **container**, where the Raman **probing** employs; vibrational spectra of N2, O2, **CO2**, SO2, H2S, CH4 and H2; and the rotational spectra of H2.

L10 ANSWER 90 OF 177 CA COPYRIGHT 2005 ACS on STN
AN 124:325519 CA
TI Method and apparatus for non-destructive elemental analysis of the headspace of a **sealed** container
IN Rae, Jay Thomas
PA Eli Lilly and Co., USA
SO PCT Int. Appl., 22 pp.
PI WO 9602835 A1 19960201 WO 1995-US8914 19950714
PRAI US 1994-275988 A 19940715
AB A method and app. is provided for detecting the elemental compn. of the headspace of a **sealed** container. The app. includes a **laser** capable of being pulsed and creating a plasma within the headspace and a detector for collecting the at. emission generated by the plasma, wherein the intensity of the emission detected from each element is proportional to its volumetric concn. within the headspace. This app. is particularly useful for **detecting** the presence of **oxygen** contamination within the **headspace** of a hermetically **sealed pharmaceutical vial**, wherein the vial contents were **sealed** under a nitrogen atm. and are susceptible to oxygen contamination.

L10 ANSWER 95 OF 177 CA COPYRIGHT 2005 ACS on STN
AN 125:346430 CA
TI **Online** ammonia determination in **food** and environmental technology using tuneable CO2 **lasers**
AU Dausch, Manfred; Fey, Dirk; Koukolitschek, Karl; Krieg, Gunther; Maier, Wilfried; Kraft, Andreas
CS Unisensor Sensorsysteme G.m.b.H., Karlsruhe, D-76149, Germany
SO Technisches Messen (1996), 63(7/8), 288-290
LA German
AB The use of a CO2 **laser**, which shows a multiline emission spectrum in the IR spectral range, for the detection of NH3 in the low ppm-range is described. The practical application is shown in the case of NH3 detection within the headspace of refillable polyethylene bottles of the European bottling industry. Another example is the NH3 detn. in hot gaseous emissions of a denitrificated ship diesel engine of the Eidgenoessische Technische Hochschule in Zuerich.

L10 ANSWER 146 OF 177 CA COPYRIGHT 2005 ACS on STN
AN 96:154510 CA
TI Application of dual-beam second-derivative tunable diode **laser** infrared spectroscopy to trace gas measurement at atmospheric pressure
AU Jungst, R. G.; Tallant, D. R.

CS Sandia Natl. Lab., Albuquerque, NM, 87185, USA
SO Proceedings of SPIE-The International Society for Optical Engineering (1981), 288(Proc. Los Alamos Conf. Opt.), 245-52
AB A dual beam diode **laser** spectrometer with off-axis reflective optics was constructed. The spectrometer can be amplitude modulated for direct absorption measurements or frequency modulated to obtain deriv. spectra. The spectrometer has high throughput, is easy to operate and align, provides good dual-beam compensation, and has no evidence of the interference effects that have been obsd. in diode **laser** spectrometers with refractive optics. Unpurged, using 2nd deriv. techniques, the instrument has measured 108 ppm CO (10 cm absorption cell, atm. pressure-broadened) with good signal/noise. With the replacement of marginal instrumental components, the signal/noise should be substantially increased. This instrument was developed to **monitor** the evolution of decompn. **gases** in **sealed containers** of small vol. at atm. pressure.

L10 ANSWER 151 OF 177 CA COPYRIGHT 2005 ACS on STN
AN 93:31854 CA
TI Non-destructive **headspace gas analysis** in **pharmaceutical ampules** by 5145 Å **laser** Raman spectroscopy
AU Bailey, Glen F.; Moore, Herbert A., Jr.
CS WRRC, USDA, Berkeley, CA, USA
SO Journal of the Parenteral Drug Association (1980), 34(2), 127-33
AB A method was **evaluated** for non-destructive **anal.** of the **gas headspace** in ampuls. A Raman spectrometer was used to **detn.** the rotational spectra of the **headspace gas** in a series of ampuls purged with known O/N mixts., and the relative rotational scattering coeffs. for O and N at atm. pressure. Calcd. O concns. were in excellent agreement with the known compn. of the purge gases. The method is safe, sensitive, objective, universally applicable, and could be adapted to total-inspection quality control in automatic or semi-automatic industrial settings.

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STN INTERNATIONAL LOGOFF AT 11:32:58 ON 18 MAY 2005